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## A NEW SPECIES OF THE GENUS *DUVALIUS* (COLEOPTERA, CARABIDAE, TRECHINI) FROM KAZAKHSTAN

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**A New Species of the Genus *Duvalius* (Coleoptera, Carabidae, Trechini) from Kazakhstan.** Belousov I. A., Kabak I. I. — *Duvalius putshkovi* sp. n. is described from Kazakhstan (Western Tien-Shan, Ugam mountain ridge). The species belongs to the same species group as the most other representatives of the genus *Duvalius* Delar. from Middle Asia and is very closely related to *Duvalius alexeevi* Belousov, 1991 from Sary-Tshelek Reservory (western Tien-Shan, Chatkal mountain ridge).

**Key words:** Coleoptera, Carabidae, *Duvalius*, new species, systematics, Central Asia, Kazakhstan, Tian-Shan.

**Новый вид рода *Duvalius* (Coleoptera, Carabidae, Trechini) из Казахстана.** Белоусов И. А., Кабак И. И. — *Duvalius putshkovi* sp. n. описан из Казахстана (Западный Тянь-Шань, Угамский хребет). Вид принадлежит к той же видовой группе, что и большинство других представителей рода *Duvalius* Delar. из Средней Азии и особенно близок к *Duvalius alexeevi* Belousov, 1991, описанному из Сары-Челекского заповедника (Западный Тянь-Шань, Чаткальский хребет).

**Ключевые слова:** Coleoptera, Carabidae, *Duvalius*, новый вид, систематика, Средняя Азия, Казахстан, Тянь-Шань.

During his trips to Middle Asia, Dr. A. Putshkov has collected a single specimen of the *Duvalius* species which turned out to represent a new species. This first representative of the genus in Kazakhstan is described in the present paper.

Morphometric characteristics are used here as in the authors' previous papers (Belousov, 1998; Belousov, Kabak, 1998) and include both umbilicate and discal formulas.

Before going further we like to express our heartily thanks to our friend and colleague Dr. A. Putshkov (Kyiv) who has supplied us with material.

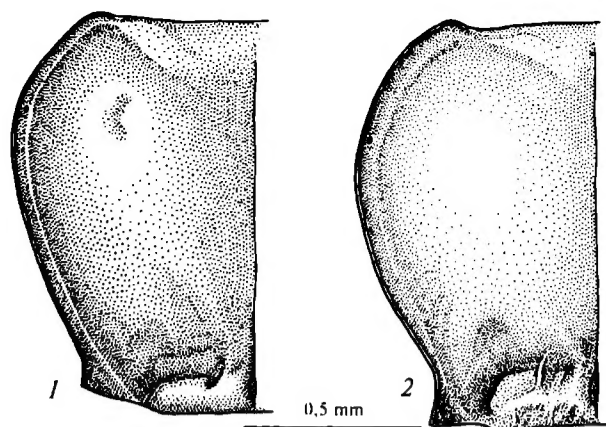
The type specimen of the new taxon is deposited in the Schmalhausen Institute of Zoology, NAS of Ukraine, Kyiv.

### *Duvalius putshkovi* Belousov et Kabak, sp. n.

Holotype. ♂, W Tien-Shan, sources of Ugam river, 6 km W Kurumzhol Pass, 2100–2200 m, 12–13.06.1998 (Putshkov leg.) (SIZK).

Habitus stout, hind-body wide and depressed, fore-body slender, legs of moderate length (compared with other members of the genus). Medium-sized species, body length 6.05 mm. Uniformly amber testaceous, only appendages, mandibles and clypeus a little lighter. Upper side completely glabrous.

Head not too large, 1.37 times narrower than pronotum. Frontal furrows deep and continuous, arched in anterior portion and almost rectilinearly divergent in posterior one; front relatively narrow in middle. Eyes well-developed and completely pigmented, of small size, about 1.90 times as short as temples, but distinctly convex. Temples long and convex. Two supraorbital setae, of which anterior one at level a little before posterior margin of eyes; its pore strongly foveolate. Posterior supraorbital seta just near



Figs 1-2. Pronotum of *Duvalius* species: 1 — *D. putshkovi*; 2 — *D. alexeevi*.

Рис. 1-2. Переднеспинка видов рода *Duvalius*: 1 — *D. putshkovi*; 2 — *D. alexeevi*.

and somewhat projecting outwards. Anterior angles widely rounded, anterior margin of pronotum slightly concave. Base of pronotum of medium width, 1.03-1.03 (1.03) times as wide as anterior margin of pronotum, hardly concave medially (almost rectilinear) and strongly obliquely truncated on sides (fig. 1). Marginal gutter of pronotum narrow, especially in middle portion, barely dilated near anterior lateral seta and strongly widened near hind angles. Prebasal transverse impression deep and sharp, interrupted medially; basal foveae moderate, weakly rugulose in bottom. Apical transverse impression well-developed, especially near median line, but vaguely delimited. Basal surface smooth, without longitudinal wrinkles. Median line distinct, becoming deeper in posterior third of pronotum and not reaching anterior margin. Discal fovea extremely superficial.

Elytra very large and relatively flat, broadest near mid-length, 1.70 times as wide as pronotum and 2.33 times as wide as head, 1.47 times as long as wide. Shoulders prominent but widely rounded. Marginal gutter of medium width, barely reflexed. Elytral striae distinct, even external ones, although shallower than internal striae; all striae finely punctured. Striae 2 and 3 anastomosing near discal pores. In apical portion of elytra, striae 2 and 3 vaguely, striae 3 and 4 distinctly connected to each other. Intervals hardly convex. Interspace 2 considerably wider than adjacent interspaces at level of subapical pore. Apical striola short and slightly curved, joining stria 5 anteriorly. Both anterior and posterior discal pores usual in position; discal formula 20,51,89; formula of umbilicate series 9,14,19,24,59,67,82,90. Apical triangle elongate, about twice as long as wide at base. Elytral surface without any trace of pubescence.

Microsculpture of head comprised of subisodiametric meshes, partly either evanescent, especially on convex portions, or transformed in transverse meshes; that of pronotum consists of more transverse meshes, faint medially on disk, and that of elytra — of serrate transverse lines.

Foretibia externally grooved and moderately pubescent.

Aedeagus (fig. 3) of moderate length, subcylindrical, only slightly depressed dorso-ventrally, most strongly bent in middle portion. Basal part of aedeagus large and swollen, basal orifice widely opened. Sagittal lobe lacking. Ventral margin clearly emarginate before apex. Latter distinctly bent upward in lateral view and of simple triangular shape in dorsal view. Endophallus armature large and symmetrical, in ventral position, with deep incision along both anterior and posterior margins. Most proximal part of endophallus armature feebly sclerotized, in dorsal position, clearly defined only

frontal furrow, not foveolate. Mandibles relatively stout as compared with other *Duvalius* species. Retinaculum of right mandible massive, with short base and hardly protruding median tooth. Antennae lacking in the only known specimen.

Pronotum (fig. 1) flat and comparatively transverse, with maximum width shifted strongly anteriorly, 1.26 times as wide as long; subcordate, 1.43 times as wide as pronotum base. Lateral sides strongly rounded anteriorly, almost rectilinearly convergent in posterior portion, deeply incised just before hind angles; latter subrectangular, pointed at apices

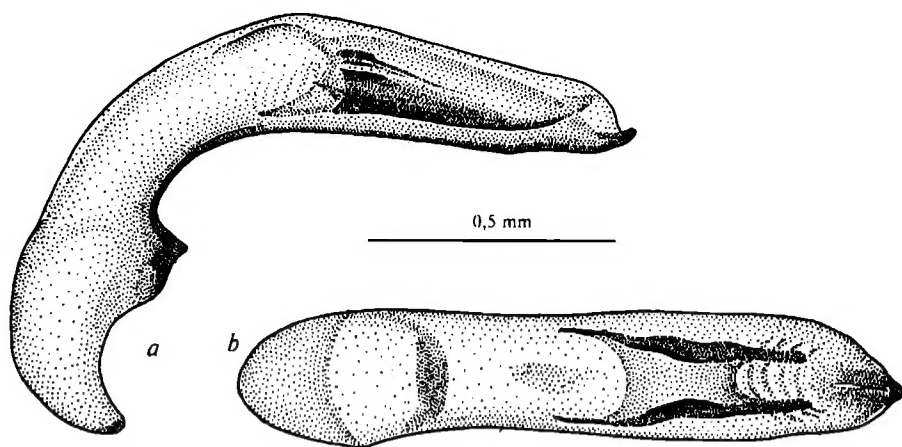


Fig. 3. Aedeagus of *Duvalius putshkovi*: a — lateral view, b — dorsal view.

Рис. 3. Эдеагус *Duvalius putshkovi*: a — боковая проекция, b — дорсальная проекция.

in lateral view. Parameres moderately narrow, of subequal length, without ventral processus, with rounded apices, each bearing 4 long setae, of which the ventral one shifted proximally.

**Diagnose.** Doubtless, the new species is most closely related to *Duvalius alexeevi* Belousov (1991), differing from it mainly in pronotum shape (fig. 1 vs. fig. 2): base strongly obliquely truncated on sides, marginal gutter narrower, sides less regularly rounded. Aedeagus of new species considerably shorter, less step-like bent, more strongly bent in middle portion (almost straight in counterpart). Endophallus armature of similar structure.

*Duvalius kryzhanovskii* Jeannel (1962) from the same mountain system, sometimes possessing similar pronotum shape with more or less oblique sides of pronotum base, is readily distinguished by considerably smaller size, pale colour of body and aedeagus shape, including not bent upward apex.

**Distribution.** Known only from the type locality, in upper course of Ugam river in West Tien-Shan.

**Ecology.** The only known specimen was found near mountain brook in habitat of *Bembidion* species at elevation 2100–2200 m. Numerous attempts to find further specimens of this species at higher elevation and near melting snow were vanish.

**Derivatio nominis.** It is a great pleasure for us to name this species after our friend and colleague, Dr. A. Putshkov from Kyiv, who was lucky to find it.

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